

CLAIMS

1. A wireless terminal having a dual band antenna arrangement comprising an antenna (10) having a first feed (12) for signals in a first, lower
5 frequency band, a second feed (14) for signals in a second, higher frequency band and a ground pin (16), first coupling means (26A) for coupling transmit and receive paths of a first transceiver to the first feed, second coupling means (26B) for coupling transmit and receive paths of a second transceiver to the
10 second feed, each of the first and second coupling means comprising a quarter wavelength transmission line (50A, 50B) having a first end coupled to the respective transmit signal path and a second end coupled by bandpass filtering means (52A, 52B) to the respective receive signal path, a first switching device (D1, D3) coupling a transmit signal path to the first end of the
15 respective quarter wavelength transmission line, a second switching device (D2, D4) coupling the second end of the respective quarter wavelength transmission line to ground, and means (36) for switching-on the first and second switching devices of one of the first and second coupling means when in a transmit mode and for switching-off the first and second switching devices when in a receive mode, the first and second switching devices of the other of
20 the first and second coupling means being non-conductive.

2. A wireless terminal as claimed in claim 1, characterised in that the antenna is a planar inverted-F antenna.

25 3. A wireless terminal as claimed in claim 1 or 2, characterised in that the ground pin (16) is disposed between, and insulated from, the first (12) and second (14) feeds.

4. A wireless terminal as claimed in claim 1, 2 or 3, characterised
30 by means (56, 58, 60) for reducing the voltage at a signal input of the band pass filtering means of the second coupling means.

5. A wireless terminal as claimed in any one of claims 1 to 4, characterised in that the first and second switching devices comprise PIN diodes.

5 6. An RF module for use with a dual band antenna arrangement, the RF module comprising a first antenna feed (12) for signals in a first, lower frequency band, a second antenna feed (14) for signals in a second, higher frequency band and a ground pin (16), first coupling means (26A) for coupling transmit and receive paths of a first transceiver to the first feed, second
10 coupling means (26B) for coupling transmit and receive paths of a second transceiver to the second feed, each of the first and second coupling means comprising a quarter wavelength transmission line (50A, 50B) having a first end coupled to the respective transmit signal path and a second end coupled by band pass filtering means (52A, 52B) to the respective receive signal path,
15 a first switching device (D1, D3) coupling a transmit signal path to the first end of the respective quarter wavelength transmission line, a second switching device (D2, D4) coupling the second end of the respective quarter wavelength transmission line to ground, and means (36) for switching-on the first and second switching devices of one of the first and second coupling means when
20 in a transmit mode and for switching-off the first and second switching devices when in a receive mode, the first and second switching devices of the other of the first and second coupling means being non-conductive.

7. A RF module as claimed in claim 6, characterised in that the
25 ground pin (16) is disposed between, and insulated from, the first (12) and second (14) feeds.

8. A RF module as claimed in claim 6 or 7, characterised by means
(56, 58, 60) for reducing the voltage at a signal input of the band pass filtering
30 means of the second coupling means.

9. The combination of a RF module as claimed in Claim 6, 7 or 8, and an antenna (10) having means for connection to the first and second feeds (12, 14) and the ground pin (16).

5 10. The combination as claimed in Claim 9, characterised in that the antenna is a planar inverted – F antenna.